

# ABSTRACT

The present invention relates to a novel drug discovery  
5 system for generating and screening molecular diversity. The  
system provides methods for mixing and cloning genetic  
materials from a plurality of species of organisms in  
combinatorial gene expression libraries to generate novel  
10 metabolic pathways and classes of compounds. The system also  
provides mobilizable combinatorial gene expression libraries  
that can be transferred from one species of host organism to  
another for expression. Also provided are specialized  
15 cloning vectors for making mobilizable gene expression  
libraries. The system also involves methods for pre-  
screening or identifying for host organisms containing a  
20 library that are capable of generating such novel pathways  
and compounds.

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